

## SECOND LIST OF RADIOCARBON DATES ON SAMPLES FROM VICTORIA, AUSTRALIA

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A list of all radiocarbon dates on Victorian samples then available was published previously (Gill 1971). By request a second list is now published. The compiler is grateful to some researchers who have made dates available before they used them themselves. Some dates would never become available if it were not for lists of this kind. The format is that of the first list, and the date numbers follow on seriatim. The numbers provide the simplest mechanism for referring to a given date. As before, the list begins with the youngest and ends with the oldest. All dates are BP.

110.  $220 \pm 80$  y (GaK-3521). Marine shells from Aboriginal midden in small tafoni cave in arkose, NE. corner of 7.5 m terrace, small point on W. side of Point Sturt, Otway coast, Victoria. Coll. E. D. Gill. Provides age of occupation, and minimal age of tafoni formation.

111.  $335 \pm 50$  y (N-834). Marine shells from Aboriginal midden in gray loam in Holocene dune at Ocean Grove, via Geelong, Victoria (Charcoal 1470 y). Coll. G. E. Williams. Gill et al. 1972.

112.  $360 \pm 105$  y (N-517-2). A series of dates was obtained from Lake Keilambete, a maar 3.3 km NW. of Terang, Western Victoria. This date was on the inorganic part of sample LK4/11. Polach et al. 1970. Bowler and Hamada 1971.

113.  $410 \pm 70$  y (GaK-3919). Marine shells from high energy shell grit/basalt boulder deposit forming vegetated terrace between vegetated dune and present shell grit beach. W. side of Horseshoe Bay and E. of Cape Reamur, 8 km W. of Port Fairy, Western Victoria. Gill 1973a.

114.  $470 \pm 105$  y (N-832). Charcoal from Aboriginal midden in upper gray loam c. 1 m thick (approx. 7 m above basal dating of 5780 y) in dune at Ocean Grove, via Geelong, Victoria. Associated shells 335  $\pm$  90 y. Coll. G. E. Williams. Gill et al. 1972.

115.  $610 \pm 110$  y (N-517). Lake Keilambete sediments, Core 4, 11-21 cm. Bowler and Hamada 1971.

116.  $935 \pm 110$  y (N-518). Lake Keilambete sediments, Core 4, 21-33 cm. Bowler and Hamada 1971.

117.  $1040 \pm 80$  y (SUA-90). Marine shells from Aboriginal midden in juvenile soil on sand ridge overlying boulder bed with marine shells at mouth of Browns Creek behind beach, Otway coast, Victoria. Coll. E. D. Gill.

118.  $1320 \pm 80$  y (SUA-87). Opercula of marine mollusc *Subinella undulata* from Aboriginal midden on Last Interglacial aeolianite cliff top, McKechnies Craigs, c. 1.3 km NW. of Cape Reamur, W. Vict.,  $38^\circ 23' S$ ,  $142^\circ 8' E$ . Port Fairy Military Map 091 671. Coll. E. D. Gill.

119.  $1670 \pm 90$  y (GaK-2860). Fibrous peat from auger hole 1, 1.2-1.5 m, at Goose Lagoon, S. side of Princes Highway, 8 km west of Port Fairy, Victoria. Gill et al. 1972.

120.  $1890 \pm 115$  y (N-390). Tree submerged by waters of Lake Keilambete and overlain by lacustrine sediments. Bowler and Hamada 1971.

121.  $1970 \pm 110$  y (N-519). Lake Keilambete sediments. Core 4, 55-65 cm. Bowler and Hamada 1971.

122.  $2015 \pm 65$  y (ANU-126). Carbonate nodules from Keilor terrace near Green Gully, c. 1 km S. of Keilor ( $37^\circ 45' S$ ,  $144^\circ 50' E$ ), Victoria. Bowler and Polach 1971.

123.  $2020 \pm 90$  y (GaK-3215). Soil from upper terrace on NE. shore of Lake Corangamite, c. 0.5 km W. of prominent road cutting, North Cundare, via Colac, Western Victoria. Coll. E. D. Gill.

124.  $2260 \pm 90$  y (GaK-3522). Fibrous peat from band 0.7-2.6 m at Goose Lagoon, S. side of Princes Highway, 8 km W. of Port Fairy, Western Victoria. Site in middle of swampy area crossed by the highway, and 4.6 m S. of its south boundary. Coll. E. D. Gill.

125.  $2410 \pm 120$  y (N-520-1). Lake Keilambete sediments, Core 4, 79-90 cm. Bowler and Hamada 1971.

126.  $2510 \pm 110$  y (GaK-2857). Marine shells from Aboriginal midden c. 0.2 km W. of Thunder Point Trigonometrical Station at Levy Point, in soil on Holocene sand overlying Last Interglacial aeolianite, c. 7 m above the sea. Gill et al. 1972.

127.  $2530 \pm 80$  y (ANU-290). Carbonate from red-brown earth on Shepparton prior stream, NE. Vict. 0.75-1.50 m. Bowler and Polach 1971.

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128.  $2560 \pm 120$  y (N-520-2). Lake Keilambete, inorganic fraction of sample LK4/79. Bowler and Hamada 1971.
129.  $2600 \pm 110$  y (N-521-1). Lake Keilambete sediments, Core 4, 1.02-1.12 m. Bowler and Hamada 1971.
130.  $2620 \pm 80$  y (SUA-89). Limpet shells from Aboriginal midden on neck of Cape Reamur, Western Victoria. In juvenile soil on sand rise above Last Interglacial Port Fairy Calcarenite. Coll. E. D. Gill.
131.  $2670 \pm 70$  y (ANU-134). Massive carbonate concretion 1.80 m deep in profile of red-brown earth on prior stream sediments exposed in right bank of Goulburn River 4.8 km S. of Shepparton, NE. Victoria. Bowler and Polach 1971.
132.  $2830 \pm 100$  y (GaK-3524). Marine shells of rock facies on top of abandoned cliff of Last Interglacial aeolianite fronted by c. 80 m width of sand ridges plus the present sandy beach with sand facies molluscs only, Venus Bay, Gippsland, Victoria, c. 0.5 km SE. of Five Mile Creek. Coll. E. D. Gill.
133.  $2840 \pm 80$  y (GaK-3917). Shells from formation of shell grit and basalt boulders filling former shoreline channel at W. end of Ocean Drive, Port Fairy, Western Victoria. Gill 1973a.
134.  $2900 \pm 120$  y (N-521-2). Lake Keilambete, inorganic fraction of sample LK4/102. Bowler and Hamada 1971.
135.  $2970 \pm 120$  y (N-522-1). Lake Keilambete sediments, Bore 4, 1.30-1.40 m. Bowler and Hamada 1971.
136.  $3080 \pm 80$  y (SUA-88). Limpet shells from Aboriginal midden in juvenile soil on beach ridge at Dura Bay (Gill 1973a) on W. side of debouchement of Goose Lagoon drain. Port Fairy Military Map 134 663, W. of Port Fairy, W. Victoria. Coll. E. D. Gill.
137.  $3150 \pm 100$  y (GaK-2410). Peat in Trotters Swamp at reservoir near Anakie, Brisbane Ranges, Victoria, depth 0.3 m. Coll. D. H. Ashton and N. Scarlett.
138.  $3320 \pm 100$  y (GaK-2858). Opercula of marine molluse *Subrinella undulata* from black soil in Holocene sand at former outlet of Goose Lagoon where the coast running N. from Cape Reamur changes direction NW. to Yambuk, Western Victoria. Gill et al. 1972.
139.  $3550 \pm 80$  y (GaK-3990). Amorphous peat 0.6 m from surface on slope under subalpine heath at Echo Flat, Lake Mountain. Check on GaK-3469, 3470. Coll. D. H. Ashton and G. J. Hargreaves.
140.  $3580 \pm 125$  y (N-523-1). Lake Keilambete sediments Core 4, 1.65-1.75 m. Bowler and Hamada 1971.
141.  $3880 \pm 90$  y (GaK-3918). *Katelysia* shells from emerged stillwater marine sandy shell bed in sewerage excavations on E. side of James St., Port Fairy, Western Victoria, behind coastal dune at South Beach Caravan Park. Gill 1973a.
142.  $3950 \pm 100$  y (GaK-3470). Amorphous peat 1.2 m from surface on slope under subalpine heath, Echo Flat, Lake Mountain. Coll. D. H. Ashton and G. J. Hargreaves.
143.  $4040 \pm 120$  y (GaK-3216). *Coxiella* shells (brackish-water gasteropods) from low terrace of consolidated sediments on E. shore of Lake Corangamite, c. 0.5 km west of prominent road cutting, North Cundare, Western Victoria. Coll. E. D. Gill.
144.  $4150 \pm 190$  y (N-522-2). Lake Keilambete, inorganic fraction of sample LK4/130. Bowler and Hamada 1971.
145.  $4200 \pm 125$  y (N-524-1). Lake Keilambete sediments, Core 4, 1.90-2 m. Bowler and Hamada 1971.
146.  $4590 \pm 90$  y (GaK-2108). Horseshoe Cr., Everton.  $146^{\circ} 34' E$ ,  $36^{\circ} 26' S$ . A discontinuous more or less horizontal bed of charcoal fragments of variable size c. 2.5 m below surface of stream terrace. 20th Ann. Rep. Soil Conserv. Auth. Viet. 1970, p. 28.
147.  $5250 \pm 135$  y (N-525-1). Lake Keilambete sediments, Core 4, 2.35-2.45 m. Bowler and Hamada 1971.
148.  $5350 \pm 110$  y (GaK-3820). Organic matter from earliest black soil in dunes at Diamond Bay, near Portsea, Sorrento Peninsula. Coll. E. C. F. Bird. Gill et al. 1972.
149.  $5380 \pm 160$  y (GaK-3469). Sphagnum peat 0.6 m from surface of bog at Echo Flat, Lake Mountain. Coll. D. H. Ashton and G. J. Hargreaves.
150.  $5430 \pm 135$  y (N-523-2). Lake Keilambete. Inorganic fraction of sample LK4/165. Bowler and Hamada 1971.
151.  $5860 \pm 60$  y (N-525-2). Lake Keilambete. Inorganic fraction of sample LK4/235. Bowler and Hamada 1971.
152.  $5780 \pm 140$  y (N-831). Charcoal from gray loam c. 1 m thick at base of Holocene dune, Ocean Grove, Central Victoria, overlying calcreted reddish sand. Coll. G. E. Williams. Gill et al. 1972.
153.  $5790 \pm 95$  y (ANU-181). Fine-earth carbonate, 10 cm deep, from soil profile in quarry S. of Quambatook, 8 km W. of Kerang, North Victoria. Bowler and Polach 1971.
154.  $5960 \pm 140$  y (N-524-2). Lake Keilambete. Inorganic fraction of sample LK4/190. Bowler and Hamada 1971.
155.  $6260 \pm 100$  y (ANU-291). Carbonate from red-brown earth, 60-76 cm, prior stream, Echuca South, North Victoria. Bowler and Polach 1971.
156.  $6290 \pm 140$  y (N-526-2). Lake Keilambete. Inorganic fraction of sample LK4/290. Bowler and Hamada 1971.
157.  $6360 \pm 140$  y (GaK-2416). Five shells of the marine stillwater pelecypod *Anadara trapezia* from Davis Shell Works, SW corner of Salt Lake, Sections 27-28 Parish of Paywit, County of Grant, Victoria. Gill et al 1971.
158.  $6440 \pm 145$  y (N-526-1). Lake Keilambete

sediments, Core 4, 2·90-3 m. Bowler and Hamada 1971.

159.  $6700 \pm 90$  y (ANU-135). Carbonate concretion from gravel pit in bed of prior stream of Campaspe system 8·9 km NE. of Rochester, Northern Victoria. Coll. from B horizon 1·1 m deep in red-brown earth. Bowler and Polach 1971.

160.  $6760 \pm 110$  y (GaK-3519). Shells of marine pelecypod *Anapella cycladea* from an emerged sandy shell bed at Shallow Inlet, E. Victoria. Coll. Miss Ann Smith. Gill et al. 1972.

161.  $7110 \pm 95$  y (ANU-90). Carbonate from 20-30 cm red-brown earth, Echuca prior stream. Bowler and Polach 1971.

162.  $7240 \pm 140$  y (GaK-3706). Peat from base of post-basaltic swamp and lake sequence resulting from ponding by the Mt. Napier ejectamenta at Buckley's Swamp, Par. Yatchaw West, sect X1 (2), c. 965 m E. of the W. boundary and c. 482 m north of the S. boundary. Coll. L. K. M. Elmore and dated by E. D. Gill.

163.  $7300 \pm 150$  y (GaK-2856). Aboriginal midden shells (marine) within compacted sandy tuff on top of Last Interglacial aeolianite cliff and Last Glacial red soil on east side of Table Cave embayment between Thunder Point and Point Pickering, Warrnambool, Western Victoria. Gill 1972.

164.  $7850 \pm 165$  y (N-527-1). Lake Keilambete sediments, Core 4, 3·25-3·45 m. Bowler and Hamada 1971.

165.  $8700 \pm 150$  y (GaK-3920). Laminated mammillary calcite overlying amorphous calcitic hard pan of Last Glacial age, formed over Last Interglacial dune and marine bed at Moulden Quarry, Dennington, Western Victoria. Gill 1967, 1973b.

166.  $8790 \pm 170$  y (GaK-3922). Solid calcrete forming a mass of rhizomorph-like concretions standing seaward of Last Glacial hardpan and rhizomorphs, but at a lower level (top 1·2 m above beach), W. side of Cape Reamur, Western Victoria. Gill 1973b.

167.  $9860 \pm 180$  y (N-527-2). Lake Keilambete. Inorganic fraction of samples LK4/325. Bowler and Hamada 1971.

168.  $10,060 \pm 140$  y (ANU-182). Quambatook Quarry (see 153) carbonate in calcareous red earth at 50-60 cm. Bowler and Polach 1971.

169.  $14,200 \pm 790$  y (N.Z. R2729/1). Soil carbonate at 0·6-0·9 m from auger hole on crest of E.-W. dune on Berribee Station, SSW. of homestead, NW. Victoria. Gill 1973c.

170.  $14,300 \pm 300$  y (N-528). Lake Keilambete sediments Core 4 at 3·95-4·12 m. Bowler and Hamada 1971.

171.  $14,900 \pm 300$  y (N-835). Shells of marine gasteropod *Subninaella undulata* from beach rock at Ocean Grove, Victoria. Coll. G. E. Williams. Gill et al. 1972.

172.  $15,220 \pm 530$  y (GaK-3214). Carbon from thin

uniform soil in prominent road cutting at North Cundare, E. side of Lake Corangamite, Western Victoria. (Above shell layer dated 28,240 y. See 102.) Coll. E. D. Gill.

173.  $15,550 \pm 230$  y (ANU-183). Fine earth carbonate in B horizon 65 cm deep in highest soil unit (Kyalite) of Churchward. Bowler and Polach 1971.

174.  $16,400 \pm 560$  y (GaK-3218). Carbonate from paleosol in E.-W. dune N. of Ouyen on Calder Highway, Northern Victoria. Gill 1973c.

175.  $20,340 \pm 500$  y (ANU-199). Lake Keilambete sediments. Carbonate from upper marl below discontinuity. Bowler and Hamada 1971.

176.  $20,350 \pm 450$  y (GaK-3921). Calcrete rhizomorph from Port Fairy Calcarenite (Last Interglacial) on coast on W. side of Cape Reamur, Western Victoria. Gill 1973b.

177.  $21,600 \pm 650$  y (N-567). Lake Keilambete sediments, sample LK37. Inorganic carbon from highest of three marl bands. Bowler and Hamada 1971.

178.  $24,000 \pm 900$  y (ANU 184). Porous nodular carbonate from second soil unit (Speewa) of Churchward, from dune at Nyah West, Northern Victoria. Bowler and Polach 1971.

179.  $27,500 \pm 700$  y (N.Z. R2729/4). Soil nodules of calcite and quartz from base of E.-W. dune on E. side of Calder Highway S. of Hattah, Northern Victoria. Gill 1973c.

180.  $28,000 \pm 1300$  y (GaK-3288). *Ostrea sinuata* from W. of Lake Melanyara from bottom of large drain beside road 1·6 km ENE. of Sale, E. Victoria. Military map reference 112,043. Coll. W. T. Ward. Average of eight U/Th assays by J. C. Schornick is 101,000 y. Gill et al. 1972.

181.  $29,100 \pm 1250$  y (N-566). Lake Keilambete sediments, sample LK34. Inorganic carbon from lowest of three marl bands. Bowler and Hamada 1971.

182.  $29,750 \pm 1200$  y (ANU-185). Porous nodular carbonate from lowest soil unit described by Churchward. Nyah West, Northern Victoria. Bowler and Polach 1971.

183.  $30,700 \pm 2400$  y (GaK-3523). Worn marine shells from high energy marine deposit at base of acolianite dune, 0·4 km N. of bridge over Hopkins River, Warrnambool, Western Victoria. U/Th shows older. Coll. E. D. Gill.

184.  $> 34,300$  y (N.Z. R2729/3). Paleosol carbonate from 4·6-5·5 m in auger hole from crest of E.-W. dune on Berribee Station, SSW. of homestead, NE. Victoria. Gill 1973c.

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